

Listing of the Claims

This listing of claims will replace all prior versions, and listings of claims in the application.

1. (Currently amended) A method for producing an automatically pH-adjusting eukaryotic dry ~~powdered~~ powder culture medium, comprising:

(a) determining the ratio of pH-opposing forms of buffer salts required to be added to a eukaryotic dry ~~powdered~~ powder culture medium to automatically provide a desired final pH upon reconstitution of said dry ~~powdered~~ powder culture medium with a solvent; and

(b) adding amounts of pH-opposing forms of buffer salts to said ~~powdered~~ powder culture medium in the ratio determined in step (a);

to produce an automatically pH-adjusting eukaryotic dry ~~powdered~~ powder culture medium having said desired final pH upon reconstitution and wherein the dry powder culture medium comprises sodium bicarbonate.

2. (Currently amended) The method of claim 1, further comprising packaging said dry ~~powdered~~ powder culture medium.

3. (Currently amended) The method of claim 1, further comprising sterilizing said dry ~~powdered~~ powder culture medium.

4. (Currently amended) The method of claim 3, wherein said sterilization is accomplished by irradiating said dry ~~powdered~~ powder culture medium with gamma rays until said medium is sterile.

5. (Currently amended) The method of claim 1 ~~any one of claims 1-3~~, wherein said medium comprises at least one buffering salt selected from the group consisting of a monobasic buffering salt and a dibasic buffering salt.

6. (Previously presented) The method of claim 5, wherein said monobasic buffering salt is a monobasic phosphate salt and said dibasic buffering salt is a dibasic phosphate salt.

7. (Previously presented) The method of claim 6, wherein said monobasic phosphate salt is a monobasic sodium phosphate salt and said dibasic phosphate salt is a dibasic sodium phosphate salt.

8. (Previously presented) The method of claim 6, wherein at least one of said monobasic or dibasic phosphate salts is a potassium phosphate salt.

9. (Currently amended) The method of claim 1, wherein said dry powder culture medium ~~contains sodium bicarbonate but~~ does not liberate CO₂ upon storage.

10. (Currently amended) An automatically pH-adjusting eukaryotic dry ~~powdered~~ powder culture medium produced by the method of claim 1 ~~any one of claims 1, 2, 3 or 9~~.

11 - 14. (Canceled)

15. (Currently amended) A method of cultivating a eukaryotic cell comprising preparing an automatically pH-adjusting eukaryotic dry ~~powdered~~ powder culture medium prepared according to the method of claim 1 ~~any one of claims 1, 2, 3 or 9~~, reconstituting the medium with at least one solvent to form a eukaryotic culture medium solution, and contacting a eukaryotic cell with said solution under conditions favoring cultivation of the cell.

16. (Previously presented) A method of cultivating a eukaryotic cell, comprising reconstituting the culture medium of claim 10 with a solvent to form a eukaryotic culture medium solution, and contacting the cell with said solution under conditions favoring the cultivation of the cell.

17 - 21. (Canceled)

22. (Previously presented) The method of claim 16, wherein said eukaryotic cell is a yeast cell, a plant cell, or a cell line derived therefrom.

23. (Previously presented) The method of claim 15, wherein said eukaryotic cell is a yeast cell, a plant cell, or a cell line derived therefrom.

24. (Previously presented) The method of claim 16, wherein said eukaryotic cell is an animal cell or a cell line derived therefrom.

25. (Previously presented) The method of claim 15, wherein said eukaryotic cell is an animal cell or a cell line derived therefrom.

26. (Previously presented) The method of claim 24, wherein said animal cell is a mammalian cell or a cell line derived therefrom.

27. (Previously presented) The method of claim 26, wherein said mammalian cell is a human cell or a cell line derived therefrom.

28. (Currently amended) A kit for culturing a eukaryotic cell, comprising one or more containers containing an automatically pH-adjusting eukaryotic dry ~~powdered~~ powder culture medium prepared according to the method of claim 1 ~~any one of claims 1, 2, 3 or 9.~~

29. (Currently amended) A kit for culturing a eukaryotic cell, comprising one or more containers containing the automatically pH-adjusting eukaryotic dry ~~powdered~~ powder culture medium of claim 10.

30. (Canceled)

31. (Previously presented) The kit of claim 28, wherein said kit further comprises one or more additional containers containing at least one additional component selected from the group consisting of at least one growth factor, at least one culture medium supplement, at least one animal tissue extract, at least one animal organ extract, at least one animal gland extract, at least one enzyme, at least one protein, at least one vitamin, at least one cytokine, at least one lipid, at least one trace element, at least one extracellular matrix component, at least one buffer, at least one antibiotic, and at least one viral inhibitor.

32. (Previously presented) The kit of claim 29, wherein said kit further comprises one or more additional containers containing at least one additional component selected from the group consisting of at least one growth factor, at least one culture medium supplement, at least one animal tissue extract, at least one animal organ extract, at least one animal gland extract, at least one enzyme, at least one protein, at least one vitamin, at least one cytokine, at least one lipid, at least one trace element, at least one extracellular matrix component, at least one buffer, at least one antibiotic, and at least one viral inhibitor.

33. (Previously presented) A composition comprising the automatically pH-adjusting culture medium of claim 10 and at least one cell.

34. (Previously presented) The composition of claim 33, wherein said composition is a powder.

35. (Canceled)

36. (Previously presented) The composition of claim 33, wherein said cell is selected from the group consisting of a yeast cell, a plant cell and an animal cell.

37. (Previously presented) The composition of claim 36, wherein said animal cell is a mammalian cell.

38. (Previously presented) The composition of claim 37, wherein said mammalian cell is a human cell.

39. (Previously presented) The composition of claim 36, wherein said cell is an established or transformed cell line.

40. (Previously presented) The method of claim 15, wherein said solvent comprises at least one solvent selected from the group consisting of water, serum and an organic solvent.

41. (Previously presented) The method of claim 40, wherein said water is distilled or deionized water.

42. (Previously presented) The method of claim 40, wherein said serum is bovine serum, human serum or fetal bovine serum.

43. (Previously presented) The method of claim 40, wherein said organic solvent is dimethylsulfoxide, acetone or ethanol.

44. (Previously presented) The method of claim 25, wherein said animal cell is a mammalian cell or a cell line derived therefrom.

45. (New) The method of claim 44, wherein said mammalian cell is a human cell or a cell derived therefrom.

46. (New) The method of claim 1, further comprising storing the dry powder culture medium at about 0-4°C.

47. (New) The method of claim 1, further comprising storing the dry powder culture medium at about 20°C to about 25°C.

48. (New) The method of claim 1, wherein the desired final pH upon reconstitution is selected from the group consisting of from about 7.1 to about 7.5, from about 7.1 to about 7.4, from about 7.2 to about 7.4, and from about 7.2 to about 7.3.

49. (New) The method of claim 5, wherein the at least one buffering salt is in the reconstituted media at a concentration selected from about 0.1 mM to about 10 mM, from about 0.2 mM to about 9 mM, from about 0.3 mM to about 8.5 mM, from about 0.4 mM to about 8

mM, from about 0.5 mM to about 7.5 mM, from about 0.6 mM to about 7 mM, and from about 0.7 mM to about 7 mM.

50. (New) A method for producing an automatically pH-adjusting agglomerated powder mammalian cell culture medium, comprising:

(a) determining the ratio of pH-opposing forms of buffer salts required to automatically provide a desired final pH upon reconstitution of said agglomerated powder culture medium with a solvent; and

(b) adding amounts of pH-opposing forms of buffer salts during the production of said agglomerated powder culture medium in the ratio determined in step (a);

to produce an automatically pH-adjusting agglomerated powder mammalian cell culture medium having said desired final pH upon reconstitution.

51. (New) The method of claim 50, further comprising packaging said agglomerated powder culture medium.

52. (New) The method of claim 50, further comprising sterilizing said agglomerated powder culture medium.

53. (New) The method of claim 52, wherein said sterilization is accomplished by irradiating said agglomerated powder culture medium with gamma rays until said medium is sterile.

54. (New) The method of claim 50, wherein said medium comprises at least one buffering salt selected from the group consisting of a monobasic buffering salt and a dibasic buffering salt.

55. (New) The method of claim 54, wherein said monobasic buffering salt is a monobasic phosphate salt and said dibasic buffering salt is a dibasic phosphate salt.

56. (New) The method of claim 55, wherein said monobasic phosphate salt is a monobasic sodium phosphate salt and said dibasic phosphate salt is a dibasic sodium phosphate salt.

57. (New) The method of claim 55, wherein at least one of said monobasic or dibasic phosphate salts is a potassium phosphate salt.

58. (New) The method of claim 50, wherein said agglomerated powder culture medium comprises sodium bicarbonate.

59. (New) The method of claim 58, wherein said dry powder culture medium does not liberate CO₂ upon storage

60. (New) An automatically pH-adjusting agglomerated mammalian cell powder culture medium produced by the method of claim 50.

61. (New) A method of cultivating a mammalian cell comprising preparing an automatically pH-adjusting agglomerated powder mammalian cell culture medium prepared according to the method of claim 50, reconstituting the medium with at least one solvent to form a mammalian cell culture medium solution, and contacting a mammalian cell with said solution under conditions favoring cultivation of the cell.

62. (New) A method of cultivating a mammalian cell, comprising reconstituting the culture medium of claim 60 with a solvent to form a mammalian cell culture medium solution, and contacting the cell with said solution under conditions favoring the cultivation of the cell.

63. (New) The method of claim 61, wherein said mammalian cell is a human cell or a cell line derived therefrom.

64. (New) The method of claim 62, wherein said mammalian cell is a human cell or a cell line derived therefrom.

65. (New) The method of claim 61, wherein said mammalian cell is an established or transformed cell line.

66. (New) The method of claim 62, wherein said mammalian cell is an established or transformed cell line.

67. (New) The method of claim 63, wherein said human cell is an established or transformed cell line.

68. (New) The method of claim 64, wherein said human cell is an established or transformed cell line.

69. (New) A kit for culturing a mammalian cell, comprising one or more containers containing an automatically pH-adjusting agglomerated mammalian cell powder culture medium prepared according to the method of claim 51.

70. (New) A kit for culturing a mammalian cell, comprising one or more containers containing the automatically pH-adjusting agglomerated mammalian cell powder culture medium of claim 60.

71. (New) The kit of claim 69, wherein said kit further comprises one or more additional containers containing at least one additional component selected from the group consisting of at least one growth factor, at least one culture medium supplement, at least one animal tissue extract, at least one animal organ extract, at least one animal gland extract, at least one enzyme, at least one protein, at least one vitamin, at least one cytokine, at least one lipid, at least one trace element, at least one extracellular matrix component, at least one buffer, at least one antibiotic, and at least one viral inhibitor.

72. (New) The kit of claim 70, wherein said kit further comprises one or more additional containers containing at least one additional component selected from the group consisting of at least one growth factor, at least one culture medium supplement, at least one animal tissue extract, at least one animal organ extract, at least one animal gland extract, at least one enzyme, at least one protein, at least one vitamin, at least one cytokine, at least one lipid, at least one trace element, at least one extracellular matrix component, at least one buffer, at least one antibiotic, and at least one viral inhibitor.

73. (New) A composition comprising the automatically pH-adjusting mammalian cell culture medium of claim 60 and at least one cell.

74. (New) The composition of claim 73, wherein said composition is a powder.

75. (New) The composition of claim 73, wherein said mammalian cell is a human cell.

76. (New) The composition of claim 73, wherein said cell is an established or transformed cell line.

77. (New) The method of claim 61, wherein said solvent comprises at least one solvent selected from the group consisting of water, serum and an organic solvent.

78. (New) The method of claim 63, wherein said water is distilled or deionized water.

79. (New) The method of claim 77, wherein said serum is bovine serum, human serum or fetal bovine serum.

80. (New) The method of claim 77, wherein said organic solvent is dimethylsulfoxide, acetone or ethanol.

81. (New) The method of claim 51, further comprising storing the dry powder culture medium at about 4°C.

82. (New) The method of claim 51, further comprising storing the dry powder culture medium at about 20°C to about 25°C.

83. (New) The method of claim 51, wherein the desired final pH upon reconstitution is selected from the group consisting of from about 7.1 to about 7.5, from about 7.1 to about 7.4, from about 7.2 to about 7.4, and from about 7.2 to about 7.3.

84. (New) The method of claim 55, wherein the at least one buffering salt is in the reconstituted media at a concentration selected from about 0.1 mM to about 10 mM, from about 0.2 mM to about 9 mM, from about 0.3 mM to about 8.5 mM, from about 0.4 mM to about

8 mM, from about 0.5 mM to about 7.5 mM, from about 0.6 mM to about 7 mM, and from about 0.7 mM to about 7 mM.